## REMARKS

Claims 1, 3 to 7 and 13 have been amended and claims 23 to 27 have been withdrawn. Claims 1 to 22 remain active in this application.

Claims 1 to 3, 5, 8 to 14 and 17 to 22 were rejected under 35 U.S.C. 102(e) as being anticipated by Mandelman et al. (U.S. Pub. 2003/0020125). The rejection is respectfully traversed.

Claim 1 requires, among other steps, the step of implanting a first dopant that has a lower concentration than that of the associated LDD region into the a lightly doped drain (LDD) region to a depth less than a LDD junction depth. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 1 further requires the step of implanting a second dopant into the substrate beyond the LDD junction depth to form a source/drain region, the implantation of the second dopant overpowering a substantial portion of the first dopant to define a floating region of the first dopant within the LDD region. No such step is taught or suggested by Mandelman either alone or in the combination as claimed. A review of Mandelman will reveal that the regions 90, 95, 97 and 99 of Mandelman are not formed in the manner claimed herein. In fact, nothing in Mandelman indicates more than one implantation to form either a halo, an LDD or both.

Claims 2 to 12 depend from claim 1 and therefore define patentably over Mandelman for at least the reasons stated above with reference to claim 1.

In addition, claim 2 further limits claim 1 by requiring that the floating region further comprise a floating ring substantially self-aligned with an edge of a gate of the transistor structure. No such step is taught or suggested by Mandelman either alone or in the combination as claimed. In fact, the floating region 90, 95 is either not aligned with

the gate if the LDD 97,99 is present and, if aligned with the gate, then there can be no LDD. Note that the implant in Mandelman is either an LDD, a halo or both and, in the case of both, there is a single implant aligned with the gate edge, whereby the regions 90 and 95 are not aligned with the gate edge.

Claim 3 further limits claim 1 by requiring forming the LDD region by implanting a dose of an LDD dopant that is greater than a dose of the first dopant. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 5 further limits claim 3 by requiring that at least one of the implantation of the first dopant and the implantation of the LDD dopant employing tilted angle implants to enhance an amount of overlap between a gate structure of the transistor structure and the LDD region. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 8 further limits claim 1 by requiring that the transistor structure be a complimentary metal oxide semiconductor (CMOS) structure that includes a gate having a side edge portion, the floating region being substantially aligned with the side edge portion of the gate. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 9 further limits claim 8 by requiring that the CMOS structure be an n-channel CMOS structure, the first dopant forming a shallow region in the LDD region that comprises a p-type dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 10 further limits claim 9 by requiring that the first dopant comprise boron, and the floating region further comprise a boron floating ring substantially aligned with

side edge portion of the gate. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 11 further limits claim 8 by requiring that the CMOS structure be a p-channel CMOS structure, the first dopant defining a shallow region that comprise an n-type dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 12 further limits claim 1 by requiring the steps of forming a gate structure above the substrate, the LDD region and the source/drain region being formed in the substrate generally around the gate structure, the gate structure overlapping at least a substantial portion of the LDD region and the floating ring being substantially aligned with an edge of the gate structure. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 13 requires, among other steps, forming a lightly doped drain (LDD) region in the substrate laterally of a channel region and extending beneath said gate structure and then forming a shallow region in the LDD region having a lower concentration than that of the associated LDD region that extends into the substrate to a depth that is less than an LDD junction depth and spaced from said channel region. No such steps are taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 13 further requires the step of forming a source/drain region, the formation of the source/drain region resulting in forming a floating structure from the shallow region that is located in the LDD region and generally aligned with the side edge of the gate structure. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claims 14 and 17 to 22 depend from claim 13 and therefore define patentably over Mandelman for at least the reasons presented above with reference to claim 13.

Claim 14 further limits claim 13 by requiring that the LDD region be formed with a dose of a dopant that is greater than a dose of a dopant utilized to form the shallow region. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 17 further limits claim 13 by requiring that at least one of the implantation of the formation of the LDD region and the formation of the shallow region further comprise employing tilted angle implants to increase an amount of overlap beneath the gate structure. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 18 further limits claim 13 by requiring that the formation of the source/drain region be implemented with a dose of a dopant that is greater than a dose of a dopant utilized to form each of the LDD region and the shallow region. No such step is taught or suggested by Mandelman either alone or in the combination as claimed.

Claim 19 further limits claim 13 by requiring that the CMOS structure be an n-channel CMOS structure, the shallow region comprising a p-type dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 20 further limits claim 19 by requiring that the shallow region comprise boron and the floating structure comprise a boron floating ring substantially aligned with the side edge of the gate structure. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 21 further limits claim 13 by requiring that the CMOS structure be a p-channel CMOS structure, the shallow region comprising an n-type dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 22 depends from claim 13 and defines patentably over Mandelman for the reasons presented above with reference to claim 13.

Claims 4, 6, 7, 15 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mandelman. The rejection is respectfully traversed.

Each of claims 4, 6, 7, 15 and 16 depends from one of claim 1 or 13 and therefore defines patentably over Mandelman for at least the reasons presented above with reference to the claims from which these claims depend.

In addition, claim 6 further limits claim 3 by requiring that the dose of the second dopant be greater than the dose of the LDD dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 7 further limits claim 3 by requiring that the implantation of the LDD dopant further comprise implanting a dose of an n-type dopant in a range from about $1e^{13}$ $cm^2$ to about $5e^{14}$ $cm^2$, and the implantation of the first dopant further comprise implanting a dose in a range from about $1e^{12}$ $cm^2$ to about $5e^{14}$ $cm^2$ of a p-type dopant. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 15 further limits claim 13 by requiring that the dose of the dopant that is utilized to form the shallow region be at least approximately twenty-percent less than the dose of the dopant that is utilized to form the LDD region. No such step is taught or suggested by Mandelman in the combination as claimed.

Claim 16 further limits claim 13 by requiring that the formation of the LDD region further comprising implanting a dose of an n-type dopant in a range from about $1e^{13}$ $cm^2$ to about $5e^{15}$ $cm^2$, and the formation of the shallow region further comprising implanting a dose in a range from about $1e^{12}$ $cm^2$ to about $1e^{14}$ $cm^2$ of a p-type dopant. No such steps are taught or suggested by Mandelman in the combination as claimed.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,

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